Tempting Trio

Box Ensemble

These catchall containers, with beautiful finger joints, are deceptively simple to make.

WOODARCHIVIST.COM

PROJECT HIGHLIGHTS

- Overall dimensions: 7¼" wide × 19⅝" long × 5⅜" high.
- The staggered arrangement of the boxes shows off the corner joinery.
- Make it with odds and ends you already have in your shop.

Skill Builders

- A clever variation in technique makes box joints easier to cut.
- Discover how a special router bit takes the hassle out of installing the bottoms in box-jointed boxes.
- Learn how to make perfect radius corners on your router table.

Build the boxes

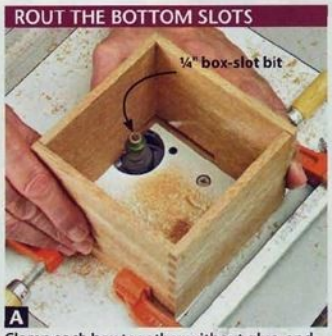
1 From ¼" stock, cut the box sides (A) to length and ⅛" wider than listed [**Materials List**, *page 80*]. Now, to form the finger joints, see *page 74*.

2 With the finger joints complete, dry-assemble the boxes, and rout a groove into each one for the bottom (B) [**Drawing 1**, **Photo A**]. (See **Source** for the router bit.) Then make a snug-fitting box-squaring jig [**Drawing 2**]. (We used ¼" hardboard.)

3 Cut the bottom (B) to size, and radius the corners [**Drawing 1**]. For a quick way to form perfect radii, see the **Shop Tip** on the *next page*.

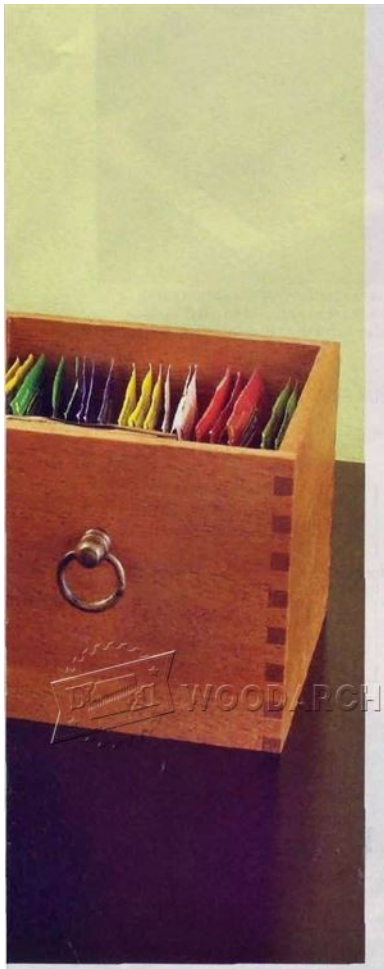
4 Dry-fit the bottoms (B) into the boxes. Then separate the sides (A) and bottoms, and finish-sand the inside faces of the parts. Mask the fingers [**Photo B**], and apply a clear finish to the inside faces of the sides and the bottoms. (We applied three coats of aerosol satin

ROUT THE BOTTOM SLOTS

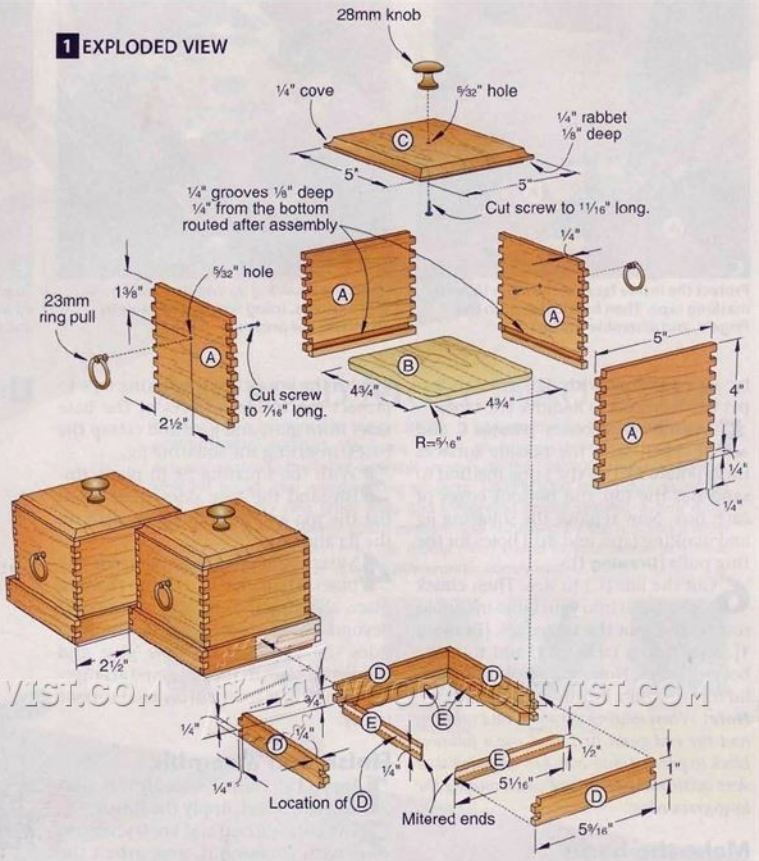


A

Clamp each box together without glue, and use a ¼" box-slot bit to rout a slot around the inside for the bottom (B).



1 EXPLODED VIEW



WOODARCHIVIST.COM

MASK THE GLUE SURFACES

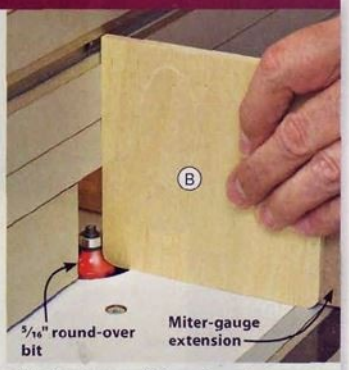
To protect the glue surfaces of the box sides (A) when finishing the inside surfaces, cover the fingers with masking tape.

SHOP TIP

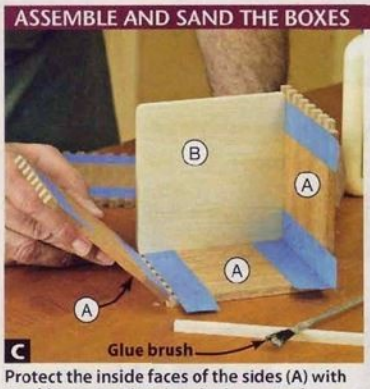
How to form perfect corner radii

Using a box-slot bit to form grooves in the box sides for the bottom saves you the trouble of filling in gaps at the corners, made by cutting the grooves on the tablesaw or router table with a straight bit. The trade-off is that you must round the corners of the bottom to match the radius of the slot bit. Here's a simple way to quickly form perfect corner radii:

Chuck a round-over bit that matches the radius of the slot cutter into your table-mounted router (5/16" for this bit). Position the fence flush with the bit pilot bearing and parallel to the miter-gauge slot. Then attach an extension to the miter gauge with the end just grazing the face of the fence. Now, with the bottom (B) against the fence and backed by the extension, rout the corners, as shown *above*.

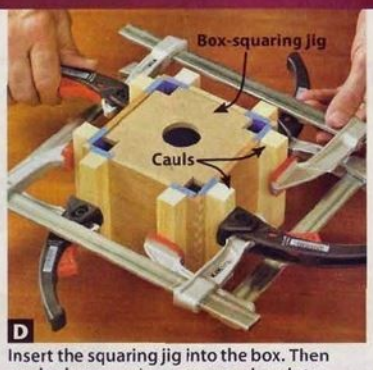


ASSEMBLE AND SAND THE BOXES



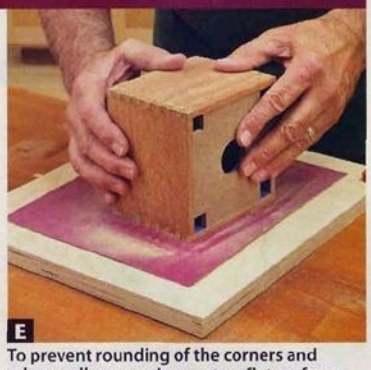
C

Protect the inside faces of the sides (A) with masking tape. Then brush glue onto the fingers, and assemble the box.



D

Insert the squaring jig into the box. Then apply clamps, using scrapwood cauls to distribute the pressure.


E

To prevent rounding of the corners and edges, adhere sandpaper to a flat surface, and finish-sand the outsides of the boxes.

lacquer, sanding with 320-grit sandpaper between coats.) Remove the tape.

5 Assemble the boxes [**Photos C** and **D**]. Then sand the outside surfaces flush [**Photo E**]. Use the same method to sand flat the top and bottom edges of each box. Now remove the squaring jig and masking tape, and drill holes for the ring pulls [**Drawing 1**].

6 Cut the lids (C) to size. Then chuck a ¼" cove bit into your table-mounted router, and rout the top edges. [**Drawing 1**]. Switch to a rabbet bit, and rout the bottom edges. Now drill a hole into each lid for the knob. Finish-sand the lids.

Note: *When routing the coves and rabbets, rout the end grain first, and use a follower block to prevent chip-out. Any chipping that does occur will be removed when routing the long-grain edges.*

Make the bases

1 Cut the base sides (D) to length and ⅛" wider than listed. Then form the finger joints in the same manner as for the box sides (A).

2 Dry-assemble one base, and make a base-squaring jig [**Drawing 2**]. Then, as with the boxes, apply masking tape to protect the inside surfaces of the base sides from glue, and glue and clamp the bases, inserting the squaring jig.

3 With the squaring jig in place, finish-sand the base sides. Then sand flat the top and bottom edges. Remove the jig and tape.

4 Miter the cleats (E) to fit inside the bases. Then glue and clamp them in place, allowing the cleats to protrude ¼" beyond the bottom edges of the base sides (D) [**Drawing 1**]. Now glue and clamp the bases in the staggered arrangement shown. Place them on a flat surface to dry.

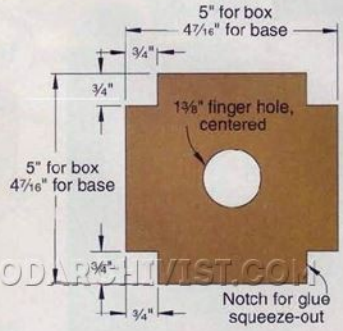
Finish and assemble

1 Inspect all the parts, and finish-sand where needed. Apply the finish.

2 Cut the ring pull and knob screws to length [**Drawing 1**], and install the hardware. Place the boxes into the base frames, resting them on the cleats (E).

Written by **Jan Svec** with **Chuck Hedlund**
Project design: **Kevin Boyle**
Illustrations: **Roxanne LeMoine; Lorna Johnson**

2 SQUARING JIGS



Materials List

Part		FINISHED SIZE T	W	L	Matl.	Qty.
A*	box sides	¼"	4"	5"	M	12
B	bottoms	¼"	4¾"	4¾"	BP	3
C	lids	½"	5"	5"	M	3
D*	base sides	¼"	1"	5⁹⁄₁₆"	M	12
E	cleats	¼"	½"	5⅛6"	M	12

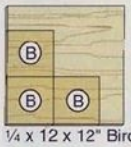
*Parts initially cut oversize. See the instructions.

Materials key: M–mahogany, BP–birch plywood.
Supplies: Masking tape, spray adhesive.
Blade and bit: Stack dado set; ¼" box-slot, ⅝" round-over, ¼" cove, and rabbet router bits.

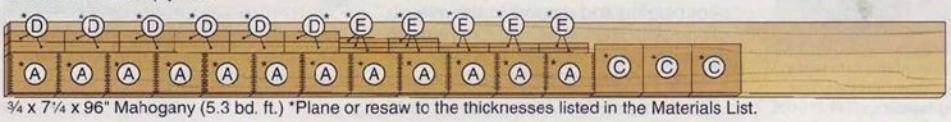
Source

Router bit: ¼" box-slotting bit no. 16J83.04, $26.60. Lee Valley, 800-871-8158, leevalley.com.
Hardware: 23mm ring pulls no. 01A23.21, $1.35 ea. (6); 28mm knobs no. 01A03.28, $2.50 ea. (3). Lee Valley, *above*.

Cutting Diagram



¼ x 12 x 12" Birch plywood



¾ x 7¼ x 96" Mahogany (5.3 bd. ft.) *Plane or resaw to the thicknesses listed in the Materials List.